

PATENT CLAIMS

1. Connecting element (1) for two end regions of box-shaped hollow profiles (2, 3), in particular hollow spacer profiles in multiple glazings, with a base plate (4) and side walls (5, 6) with resilient retainer elements (30, 31; 23, 24), characterized in that the side walls (5, 6) are profiled in cross section, in a first region (7, 8) of each side wall (5, 6) adjoining the base plate (4) the cross sectional profile of this region (7, 8) is developed such that the side wall (5, 6) forms a spring element, which is deflectable in one direction (13) approximately parallel to the face (11) and at right angles to the longitudinal axis (12) of the base plate (4) and in a second region (9, 10) of each side wall (5, 6), which forms the free end region of the side wall (5, 6), the cross sectional profile of this region (9, 10) is developed such that this region (9, 10) of the side wall (5, 6) forms a further spring element, which is deflectable at least in a direction (14) approximately at right angles to the face (11) and to the longitudinal axis (12) of the base plate (4).
2. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1, characterized in that the cross sectional profile of the side walls (5, 6) is multiply curved and/or bent.
3. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 or 2, characterized in that the first regions (7, 8) of the two side walls (5, 6) of the connecting element (1) are curved outwardly and against the side walls (15, 16) of the hollow profile (2, 3) and, in the installed state, are resiliently in contact with a subregion (19, 20) on these side walls (15, 16) of the hollow profile (2, 3).
4. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 to 3, characterized in that the second regions (9, 10) of the two side walls (5, 6) comprise in the longitudinal direction of the connecting element several recesses (21, 22) open toward the free end region and saw teeth (23, 24) disposed between these recesses (21, 22), the saw teeth (23) of the, in the longitudinal direction, left half (26) of the connecting element (1) and the saw teeth (24) of the right half (26) of the connecting element (1) are directed opposite one another.

5. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 to 4, characterized in that the connecting element (1) is comprised of a material from the group of high-grade steels and the thickness of the material is maximally 0.4 mm.
6. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 to 5, characterized in that in the center of the base plate (4) a reinforcement rib (27) is disposed at least over a portion of the length of the connecting element (1).
7. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 to 6, characterized in that in the installed state the base plate (4) of the connecting element (1) is in contact on an inner broadside (17) of the hollow profiles (2, 3) and the free ends (28, 29) of the second region (9, 10) of each side wall (5, 6) of the connecting element (1) are resiliently in contact on the opposite broadside (18) of the hollow profiles (2, 3).
8. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 1 to 7, characterized in that on the first region (7, 8) of each side wall (5, 6) are disposed outwardly directed retainer claws (30, 31).
9. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 8, characterized in that these retainer claws (30, 31) are comprised of star-shaped breakthroughs (32) in the side wall (5, 6), which are pressed from the inside to the outside and whose flaps (33) project beyond the outer face of the side wall (5, 6).
10. Connecting element for two end regions of box-shaped hollow profiles as claimed in patent claim 4, characterized in that the depth (34) of the recesses (21, 22) in the second region (9, 10) of the side walls (5, 6) are greater than one half of the total height of the side wall (5, 6).